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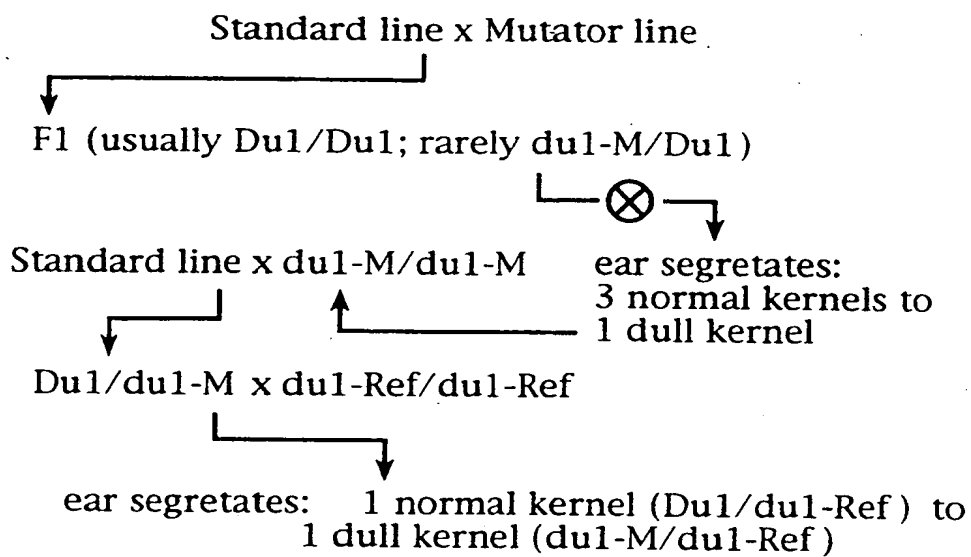


FIGURE 1A

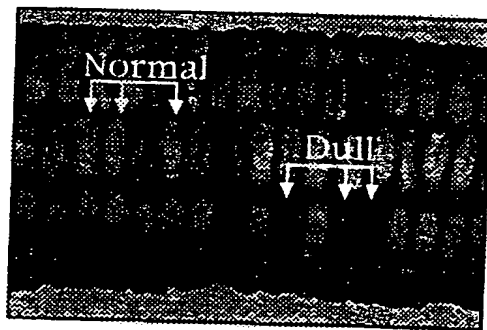


FIGURE 1B

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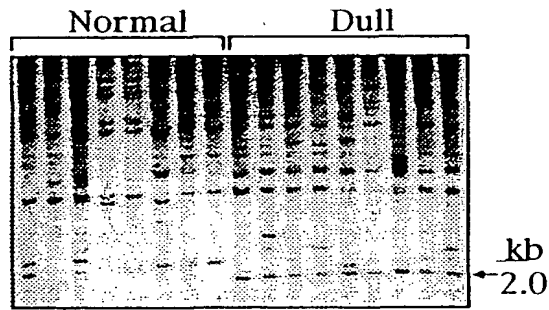


FIGURE 2A



FIGURE 2B

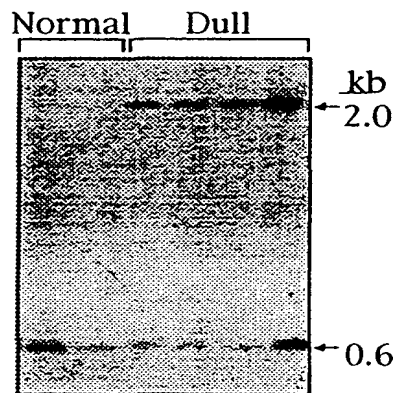


FIGURE 2C

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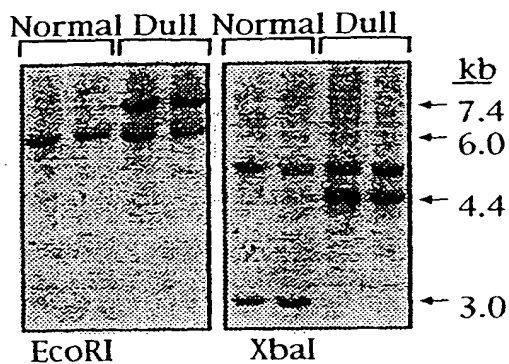


FIGURE 3A

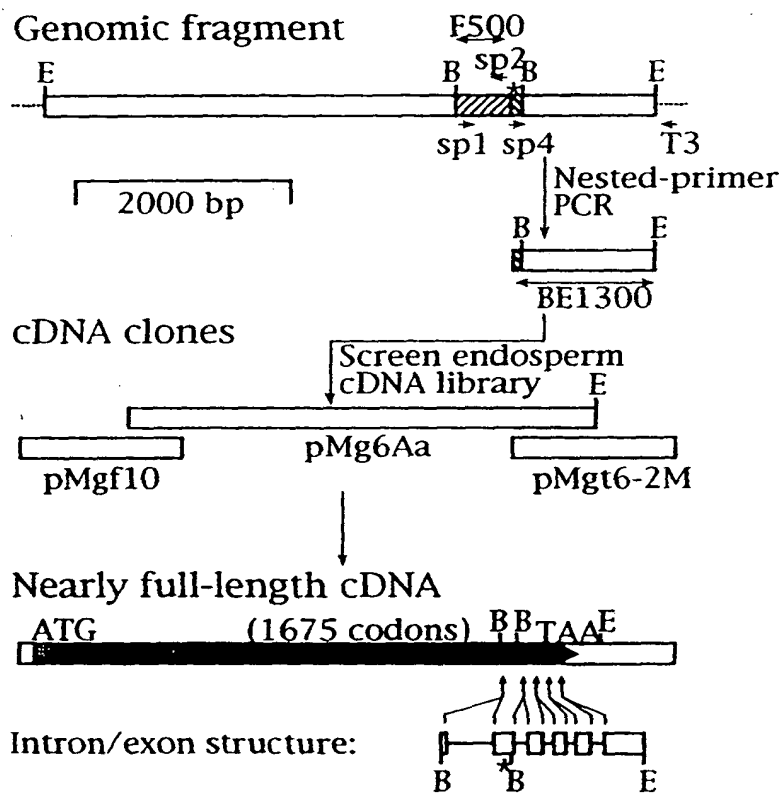


FIGURE 3B

Title: dull1 CODING FOR A NOVEL
STARCH SYNTHASE AND USES THEREOF
Inventor Name: Alan M. Myers et al.
Appl. No. UnAssigned
Docket No.: ISU-003BX

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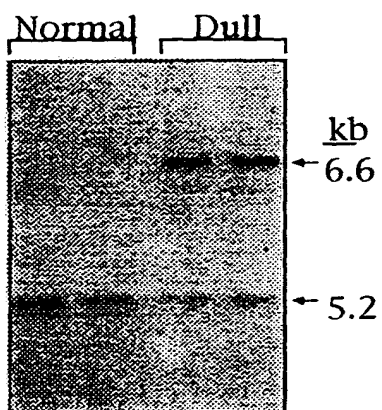


FIGURE 4

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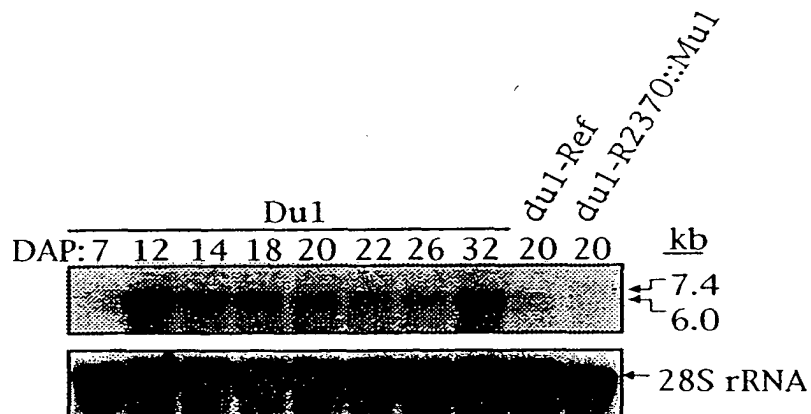


FIGURE 5A

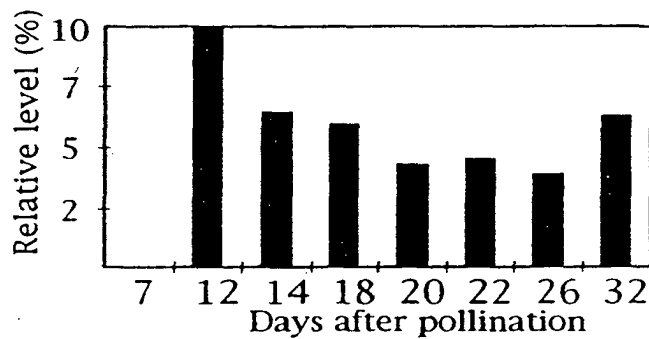


FIGURE 5B

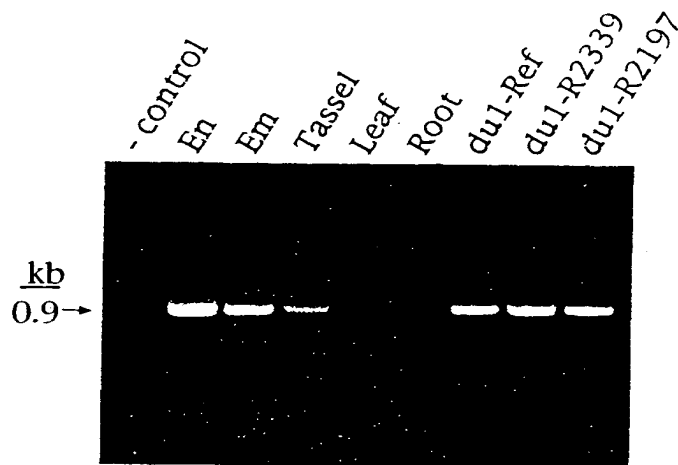


FIGURE 5C

FIGURE 6A-1

FIGURE 6A-1

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DU1	EQSIAMNEEQTIITEEDIPMAVEIGIDKAKFLILSEESSWDENEVGIIIEADEQYIE	738
SS3	VEPQQLKENNAGNVEYKGPVASKLLEITKASDVVEHTESNEIDDLQINSFFKSDLEIEDE	292
DU1	VDETSMTSECIOESPNDLDPQALWSMLQELAEKNYSLSGNKLFITYPVLKADSTIDLY	797
SS3	PLAAGTVETCJSSNLRLMEANLRRQAERLAENLLOQIRLECFBEWVKPDEDVEIF	351
DU1	FNRDLSAVANEFPDVLTKGAFNCKWRRFFTEKHKSELAGDWMCKKLYIPKQAYRMDFFVE	856
SS3	LNRLSLTLKNEFDVLTJMGAFNEMRYBSETRLTETHLNGDWMCKIHVBPKEAYRADDFVE	410
DU1	FNGHTVYENNNNDNFVITQIESTMDENLFEFLAEKQRELEMLANEEAEERRROTDEQRR	915
SS3	FNGQDVYDNNDCNDFSITVKGMQIIDEFENELLEKWRQEKLAKEQAEERLAEEOOR	469
DU1	MEFERAADKADRVQAKVEVETKKNKLCNVLGLARAPVDNLWYIEPIITTCQEAJVRLYYN	974
SS3	IEAEKAEIEADRAQAKEEAAKKKVLRELNVKATKTRDITWYIEPSEFKCEDKVRLYYN	528
DU1	INSRPLVHSTEIMHGGYNNMDGLSFAERLVHHHDKDCDWMFADVVPERTYVLDWVE	1033
SS3	KSSCPISHAKDILMHGGYNNMDGLSIVKKLYKSERIDCDWMYTEVVIIDQALFLDWVE	587
DU1	ADGPPGSAFNYDNNGGHDFHATLIPNNMTEEEYWMEEEOQRTYTRLOQERREREAIKKA	1092
SS3	ADGPPKHAIAYDNNHRODFHAIIVENHIPEELIYWEEHQIFKTLQERRLREAAVRKV	646
DU1	ERNAKMKAEEMKEKTMFMFLSQKHIVYTEPLETHAGTTIDVLNPSNTVLIGKPEVWFR	1151
SS3	EKTALLKTEIKERTMKSELLSOKHVYTEPIDLOAGSSVTIYINPANTVLANGKPEIWER	705
DU1	CSFNRWVYPCGVLPQKMVOAENGSHLKAIVYVERDAYMDFVFSSEEGGYDNRNGL	1210
SS3	CSFNRWTHRLCPPLPQKMSPAENGTHVRATVKVBLDAYMDFVFSEREDGGIFDNKSGM	764
DU1	DYHIPVFGSIKEPPMHIVHIAVEMAPIAKVGGGLGDVVTSLSRAVODLGHNVVILPKY	1269
SS3	DYHIPVFGGVFAKEPPMHIVHIAVEMAPIAKVGGGLGDVVTSLSRAVODLHNVDIILPKY	823
DU1	GCTNLSNVKNLQIHQSFSWGGSEINVWRGLVEGLQVYFLEPQNGMFGVGMVYG RDOR	1328
SS3	DCIKMNVKIDFRFHKNYFWGGTEIKVWFGVGLSVYFLEPONGLESKGVYGCSDGE	882

FIGURE 6A-2

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DU1	RFGFFCRSALEFLLOSGSSPNIIHCHDWSSAPVAILHKEENYAKSSLANARVFTIHNLE	1387
SS3	RFGFFCHALEFLLOSGFSEDIIHCHDWSSAPVAILHKEQYTHYGLSKSRIVFTIHNLE	941
DU1	FGAHHICKAMRYCDKATTVSNTYSKEVSGHGAIMPULCKFYGILNGIDPDIWDFYNDNF	1446
SS3	FGADLIGRAMTNADKATTVSPTYSQEVSGNPVIPPPIHKEFGIVNGIDPDIWDELNDKE	1000
DU1	IPVHYTCENVVEGKRAAKRALQCKFGCLQCIDMPVGVITRLTHOKGIHLIKHAIHRTLE	1505
SS3	IPVHYTCENVVEGKRAAKRALQCKFGCLQCIDMPVGVITRLTHOKGIHLIKHAIHRTLE	1059
DU1	RNGQVLLGSAPDRHQADFNLANILHGVNHGQVRLSLTYDEPLSHLIYAGSDFILVF	1564
SS3	RNGQVLLGSAPDRHQADFNLANILHGVNHGQVRLSLTYDEPLSHLIYAGSDFILVF	1118
DU1	SIFEPCGLTOLVAMRYGTHIPVRKTGGLEDTVFEDVDNDKERARDRELEPNGFSDGADS	1623
SS3	SIFEPCGLTOLVAMRYGTHIPVRKTGGLEDTVFEDVDNDKERARDRELEPNGFSDGADA	1177
DU1	NGVDYALNRATSAWFDARSWFSLCKVMEQDWSWNRPALDYIELYRQASKL	1674
SS3	GGVDYALNRATSAWFDARSWFSLCKVMEQDWSWNRPALDYIELYHARKLE	1230

DU1 (SEQ ID NO: 12)

SS3 (SEQ ID NO: 35)

FIGURE 6A-3

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Appl. No. UnAssigned
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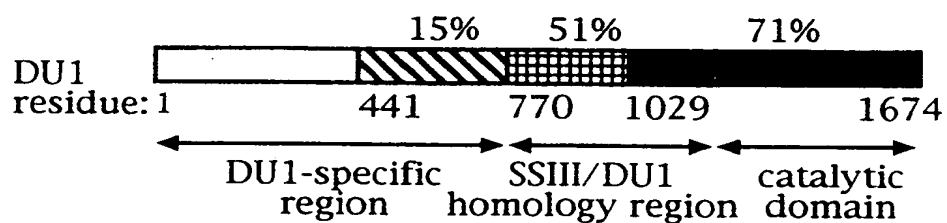


FIGURE 6B

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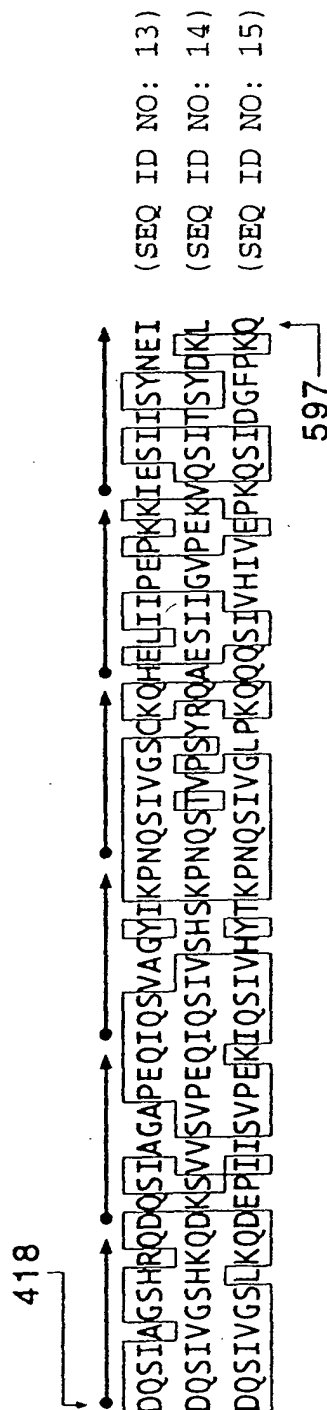


FIGURE 7A

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SBE-repeats in DU1:

478	DQSI	VG	SHKQ	487	(SEQ ID NO: 16)
538	DQSI	VG	SLKQ	547	(SEQ ID NO: 17)
	6/6 match				
448	NQSI	VG	SCKQ	457	(SEQ ID NO: 18)
568	NQSI	VG	LPKQ	577	(SEQ ID NO: 19)
418	DQSI	AG	SHRQ	427	(SEQ ID NO: 20)
428	DQSI	AG	APEQ	437	(SEQ ID NO: 21)
404	DKSI	VG	VPQQ	413	(SEQ ID NO: 22)
598	DLSI	VG	NEFQ	607	(SEQ ID NO: 23)
	5/6 match				

FIGURE 7B-1

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SBEI family:

Maize SBEI	529	*	*	553	(SEQ ID NO: 24)
Pea SBEII					(SEQ ID NO: 25)
Wheat SBEI					(SEQ ID NO: 26)

KCIAYAESH DQSIVG DKTIAFLLMD
 KCVSYAESH DQSIVG DKTIAFLLMD
 KCIAYAESH DQSIVG DKTMAFLLMD

6/6 match

SBEII family:

Maize SBEIIa	572	*	*	596	(SEQ ID NO: 27)
Maize SBEIIb					(SEQ ID NO: 28)
Pea SBEI					(SEQ ID NO: 29)

KCVTYCESH DQALVG DKTIAFWLMD
 KCVTYAESH DQALVG DKTIAFWLMD
 KCVVYCESH DQALVG DKTIAFWLMD

4/6 match

Glycogen branching enzymes:

Yeast GLC3	477	*	*	501	(SEQ ID NO: 30)
Human liver					(SEQ ID NO: 31)

KVVAACESH DQALVG DKTSLAFWLMD
 KCIAYAESH DQALVG DKTTLAFWLMD

4/6 match

FIGURE 7B-2

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150 → [E]TVDEAEVEEDK-- [F]EVDTSGLVLRNVAVR (SEQ ID NO: 32)
 [E]VDPKDEHNAKDV [F]VVDSSGTAPDNAVE (SEQ ID NO: 33)
 [E]VVDEAEVEEDM--VDVDILGLD [L]NNATI ← 233 (SEQ ID NO: 34)

FIGURE 7C

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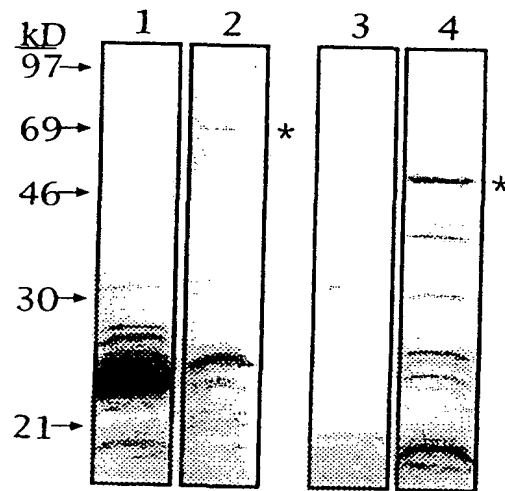


FIGURE 8

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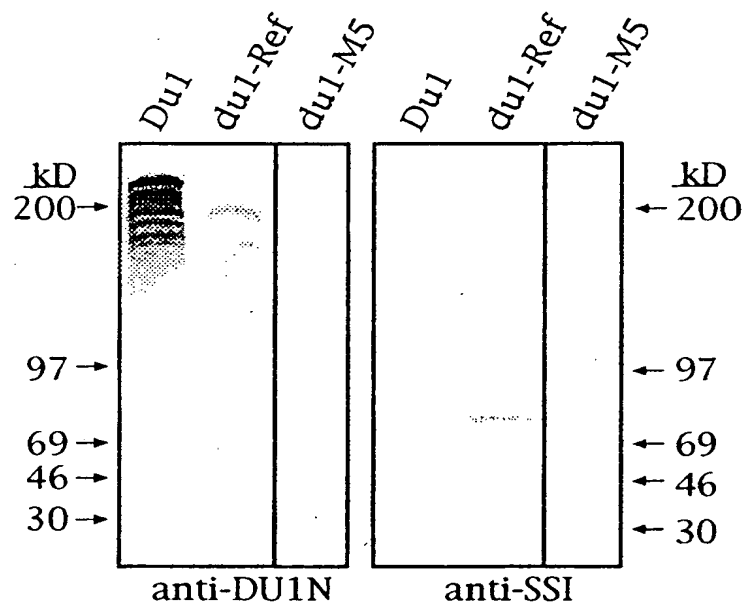


FIGURE 9A

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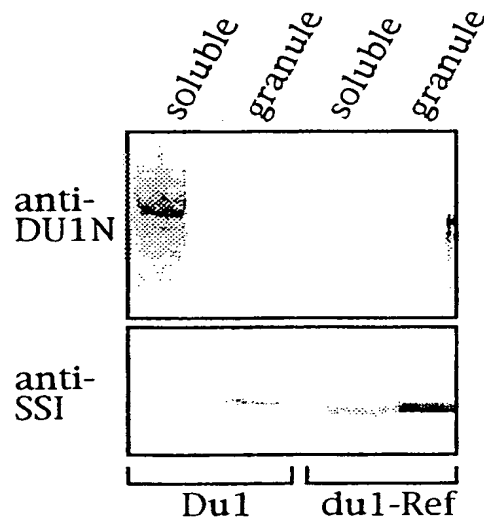


FIGURE 9B

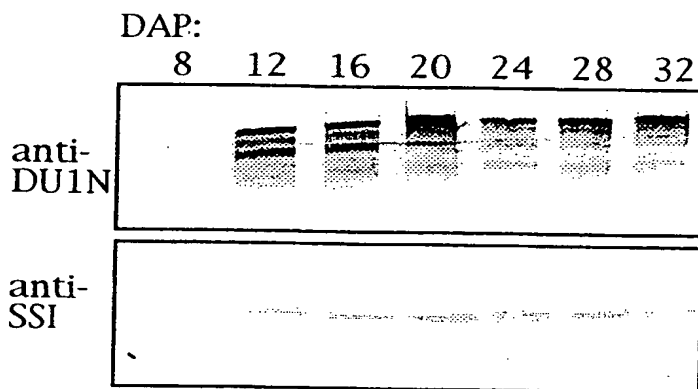


FIGURE 9C

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Appl. No. UnAssigned
Docket No.: ISU-003BX

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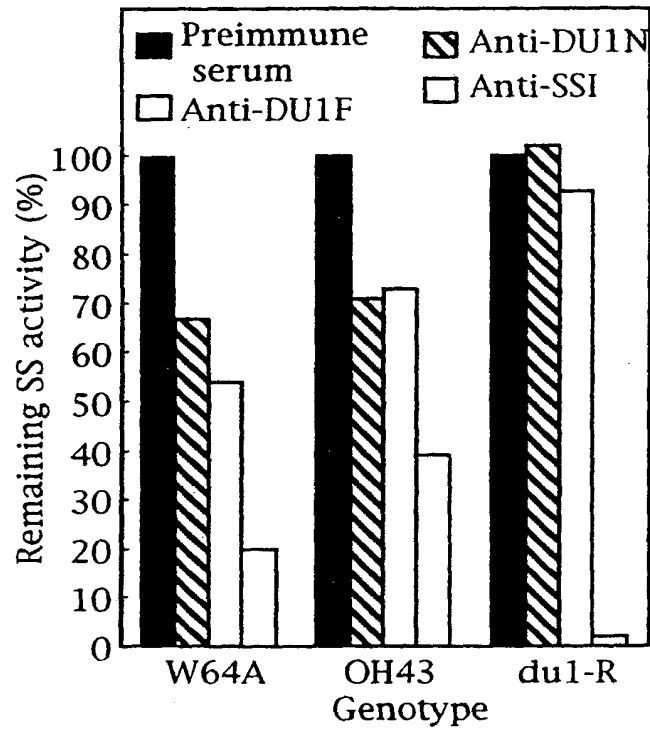


FIGURE 10

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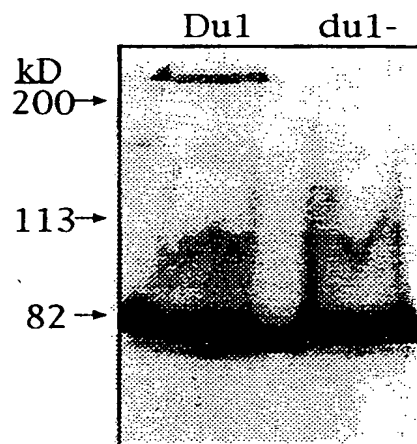


FIGURE 11A

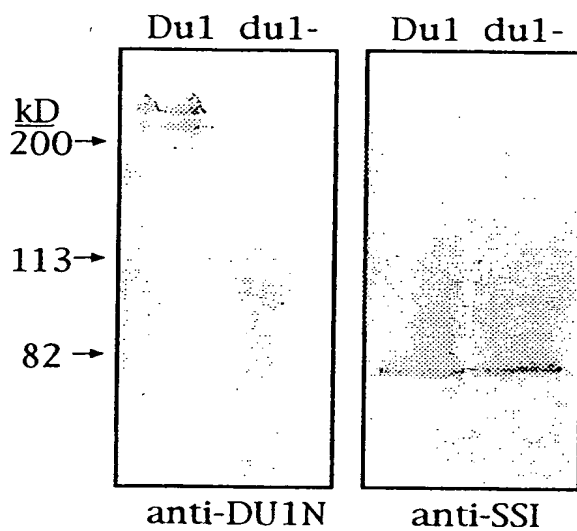


FIGURE 11B

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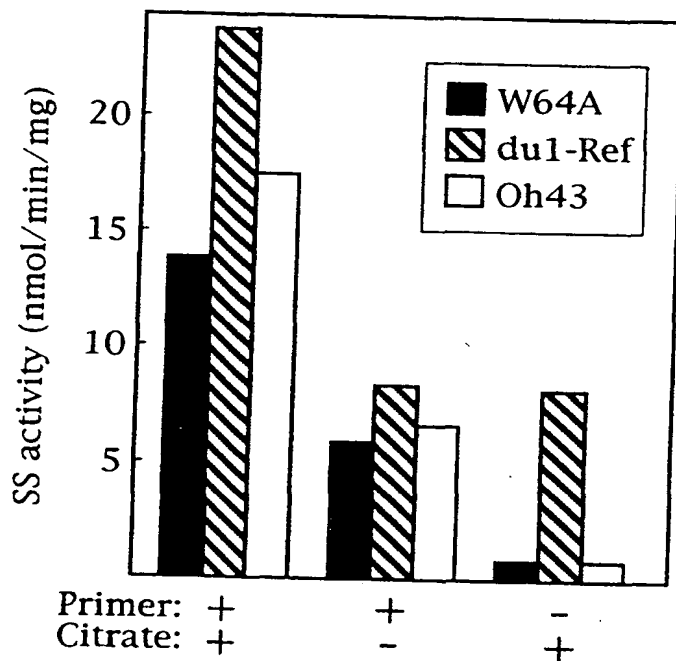


FIGURE 12